AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A training method for a power amplifier pre-distorter formed by a FIR filter structure including

an individual look-up table for each filter tap, each look-up table representing a discretized polynomial in a variable representing signal amplitude, and

means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of a corresponding complex signal value to be multiplied by the filter tap, said training method including the steps of

determining a first estimate of a first look-up table assigned to a first filter tap, assuming a second look-up table assigned to a second filter tap is set to predetermined table values;

determining a second estimate of the second look-up table, assuming the first look-up table is set to the determined first estimate.

2. (original) The method of claim 1, including the further step of refining the first estimate, assuming the second look-up table is set to the latest determined second estimate.

3. (original) The method of claim1, including the further steps of

(a) refining the first estimate, assuming the second look-up table is set to the latest determined second estimate;

(b) refining the second estimate, assuming the first look-up table is set to the latest determined first estimate.

4. (original) The method of claim 3, including the step of repeating steps (a) and (b) until the first and second estimates have converged.

5. (currently amended) The method of ~~any of the preceding claims~~ claim 1, wherein the determining and refining steps involve solving equations having the same algebraic form.

6. (Currently Amended) A base station including a power amplifier pre-distorter formed by a FIR filter structure including

an individual look-up table for each filter tap, each look-up table representing a discretized polynomial in a variable representing signal amplitude, and

means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of a corresponding complex signal value to be multiplied by the filter tap, wherein said base station further includes a pre- distorter trainer ~~(46)~~ including:

means for determining a first estimate of a first look-up table assigned to a first filter tap, assuming a second look-up table assigned to a second filter tap is set to predetermined table values;

means for determining a second estimate of the second look-up table, assuming the first look-up table is set to the determined first estimate.

7. (original) The base station of claim 6, wherein said trainer includes means for refining the first estimate, assuming the second look-up table is set to the latest determined second estimate.

8. (original) The base station of claim 6, wherein said trainer includes means for

(a) refining the first estimate, assuming the second look-up table is set to the latest determined second estimate;

(b) refining the second estimate, assuming the first look-up table is set to the latest determined first estimate.

9. (original) The base station of claim 8, wherein said trainer includes means for repeating steps (a) and (b) until the first and second estimates have converged.